

A NEWLY RECOGNIZED SPECIES OF *DALEA* (FABACEAE) FROM  
NUEVO LEON, MEXICO

Guy L. Nesom

Department of Botany, University of Texas, Austin, Texas 78713 U.S.A.

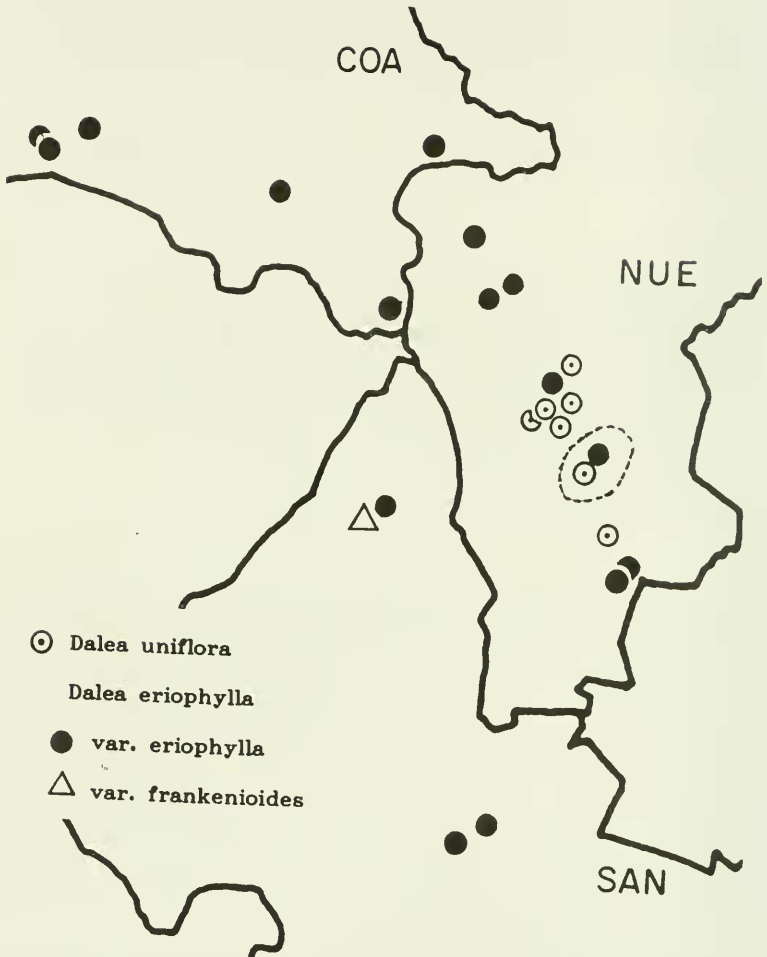
ABSTRACT

*Dalea eriophylla* S. Wats. var. *uniflora* Barneby is represented by at least eight collections from eastcentral Nuevo León, where it is closely sympatric and nonintergrading with the typical variety. Var. *uniflora* differs from var. *eriophylla* in its narrower, revolute leaves and inflorescence reduced to a single flower, and it is elevated to species rank as *D. uniflora* comb. et stat. nov.

KEY WORDS: *Dalea*, Fabaceae, Nuevo León, México

*Dalea eriophylla* S. Wats. apparently is morphologically isolated among its relatives in sect. *Parosela* (Cav.) Barneby. Among other taxa with sessile calyces in that section, the species has been placed in series *Eriophyllae* Barneby, based on its palmately 3 foliolate (vs. pinnately compound) leaves (Barneby 1977). It is distributed from southern Coahuila through the southern half of Nuevo León and into northern San Luis Potosí (Map 1). To account for variation in vestiture of the leaves and calyx, Barneby recognized two varieties within the species, the typical variety and var. *frankenoides* Barneby, the latter known only from a single collection in the Sierra de Catorce of northwestern San Luis Potosí. He later added *D. eriophylla* var. *uniflora* Barneby (1983), more distantly separated in morphology from the other two taxa than the latter are between themselves.

Var. *uniflora* differs from var. *eriophylla* in its nearly linear, tightly revolute leaves (vs. oblanceolate to obovate, relatively flat) and inflorescence reduced to a single flower (vs. a dense, terminal spike of flowers). The former is now known from a number of localities in eastcentral Nuevo León, and judging from label data and the geology of the area where it occurs, it appears to be an obligate gypsophile. Its geographic range lies within that of var. *eriophylla* (Map 1), which occurs on substrates of both limestone and gypsum. The two taxa have



Map 1. Distribution of *Dalea eriophylla* and *Dalea uniflora*. The circled area includes the location of Cerro Grande, where the two are known to be very closely sympatric (see text). Mapped localities are drawn primarily from specimens at LL,TEX, supplemented by citations from Barneby (1977).

been collected in very close proximity on Cerro Grande in southeastern Nuevo León (var. *erriophylla* - 2050 m, 19 Oct 1986, *Hinton et al. 19091*, TEX; var. *uniflora* - 2200 m, 18 Jun 1986, *Hinton et al. 18961*, TEX), and can probably be found in similar circumstances elsewhere. No aspect of variation among specimens referable to either taxon suggests that gene flow occurs between them. The two are morphologically distinct and appear to be reproductively isolated, and they are justifiably treated as separate species.

***Dalea uniflora*** (Barneby) Nesom, *comb. et stat. nov.* BASIONYM: *Dalea erriophylla* S. Wats. var. *uniflora* Barneby, *Sida* 10:14. 1983. TYPE: MEXICO. Nuevo León: Mpio. Galeana, open pine slope 4 mi S of Pablillo, 20 Jul 1958, *D.S. Correll & I.M. Johnston 19903* (HOLOTYPE: LL!).

Additional collections examined: MEXICO. Nuevo León: Mpio. Aramberri: Cerro Grande, pine woods, 2200 m, 18 Jun 1986, *Hinton et al. 18961* (TEX); near San Francisco, gypsum hillside, 1740 m, 13 May 1992, *Hinton et al. 21966* (TEX, glabrous leaves) and *21971* (TEX, puberulent leaves). Mpio. Galeana: 8 km W of Pablillo, woods of *Pinus cembroides*, 2000 m, 27 Jul 1989, *Estrada 1615* (TEX); 10 km E of Las Norias, gypsum hillside, 1960 m, 19 Jul 1984, *Hinton et al. 18752* (TEX); N of Dr. Arroyo near 100° 00' W, 24° 30' N, Jul 1982, *Vankat 96* (TEX). Barneby (1977) cited one additional specimen (sterile) from Mpio. Galeana: 22 mi NW of Ascensión [near Pablillo], *Shreve & Tinkham 9869* (GH), which he originally noted to be atypical and later (1983) included with var. *uniflora*.

The vestiture of *Dalea uniflora* is typically and usually puberulent with soft, crinkly-curly hairs, but the hairs may be nearly straight (e.g., *Hinton 18961*). The leaves on one of the two collections from near San Francisco (*Hinton 21966*) are completely glabrous except at the articulation of the leaflets, while leaves of the other (*Hinton 21971*) are typically puberulent. These plants appear to be identical in other features.

Barneby (1977, 1983) noted that *Dalea erriophylla* var. *frankenioides* Barneby evidently is closely sympatric with var. *erriophylla* but is distinct from it in leaf morphology and aspects of vestiture. He commented (1977, p. 459) that the vestiture of *D. erriophylla* "cannot in any sense be thought of as transitional" to var. *frankenioides*. Species rank may also prove to be more appropriate for var. *frankenioides* when more collections are available for study.

#### ACKNOWLEDGMENTS

I thank Billie Turner and Rupert Barneby for their comments on the manuscript.

LITERATURE CITED

- Barneby, R.C. 1977. Daleae Imagines. Mem. New York Bot. Gard. 27:1-891.
- . 1983. A new variety of *Dalea eriophylla* S. Wats. (Leguminosae-Amorphae) from Sierra Madre Oriental. Sida 10:14.